108.1 - Alcohols and Ethers [Oxygenates] in Reference Fuels (liquid form)

SRMs 1829, 1837, 1838, and 1839 are for calibrating instruments and validating methods used to determine various alcohols in gasoline. SRM 1829 is issued as a set of six sealed 20mL ampoules; SRMs 1837, 1838 and 1839 are each issued as a set of five sealed 20mL ampoules.

SRMs 2286 through 2297 were produced in response to the U.S. EPA Final Rule on Reformulated Gasoline aimed at reducing the volatile organic compounds emitted from gasoline. They consist of varying quantities of alcohol and ether (oxygenate) solutions in gasoline. SRMs 2286 through 2293 are certified for constituent oxygenate concentration and resultant oxygen concentration in gasoline. Each SRM unit is issued as a set of three sealed 20mL ampoulestwo ampoules contain oxygenate and one ampoule contains base reference gasoline. SRMs 2294 through 2297 are certified for oxygenate, sulfur, benzene, and toluene, with reference values for olefins and aromatics. Each SRM unit is issued as a set of two sealed 20mL ampoules.

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PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

			Concentration (mass fraction, in %)							
SRM	**Description**	**Unit of Issue**	**Methanol**	**Ethanol**	**Methanol and t-Butanol**	**Oxygenate**	**Oxygen**	**Sulfur**	**Toulene**	**Benzene**
1829	Alcohols in Reference Fuels	set (6)	0.335	11.39	10.33 + 6.63					
1837	Methanol and Butanol (in Gasoline)	5 x 20 mL			10.33 + 6.63					
1838	Ethanol (in Gasoline)	5 x 20 mL		11.39						
1839	Methanol (in Gasoline)	5 x 20 mL	0.335							
2286	Ethanol (in Gasoline)	set (3)				5.73	2.02			
2287	Ethanol (in Gasoline)	set (3)				10.07	3.53			
2288	t-Amyl-methyl Ether (in Gasoline)	set (3)				12.78	2.02			
2289	t-Amyl-methyl Ether (in Gasoline)	set (3)				17.30	2.73			
2290	Ethyl-t-butyl Ether (in Gasoline)	set (3)				12.78	2.01			
2291	Ethyl-t-butyl Ether (in Gasoline)	set (3)				17.18	2.70			
2293	Methyl-t-butyl Ethyl (in Gasoline)	set (3)				14.86	2.71			
2294	Reformulated Gasoline (nominal 11% MTBE)	2 x 20 mL				10.97	2.01	0.00409	8.29	1.03
2295	Reformulated Gasoline (nominal 15% MTBE)	2 x 20 mL				14.54	2.66	0.0308	7.89	0.99
2296	Reformulated Gasoline (nominal 13% ETBE)	2 x 20 mL				13.02	2.06	0.0040	8.02	1.0
2297	Reformulated Gasoline (nominal 10% Ethanol)	2 X 20 mL				9.91	3.50	0.03037	8.27	1.04

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